

A NEW SPECIES OF TURNIXACARUS, A NEWLY RECORD FEATHER MITE GENUS (ASTIGMATA, PTEROLICHIDAE), FROM CHINA

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Abstract The present paper deals with a newly recorded genus *Turnixacarus* Gaud et Atyeo, 1996 and a new species, *Turnixacarus longisetus* sp. nov. collected from *Turnix susinator blakistoni* (Swinhoe) (Gruiformes, Turnicidae) in Guizhou Province of China. The type specimens of the new species are preserved in the Insect Collection of Southwest University, Chongqing, China.

Key words Feather mites, Pterolichidae, *Turnixacarus*, new record, new species.

Feather mites are obligatory permanent ectoparasites or paraphages living on almost all recent orders of birds. They occur on flight feathers and large coverts of the wings, sometimes in the down, layer and on the skin (Gaud & Atyeo, 1996; Dabert, 1999; Mironov, 2003; Proctor, 2003). There are over 2 400 known species in 450 genera of 33–36 families in 3 superfamilies (Mironov, 2003), and the assumed total number of species is probably about 10 000 or even much more (Gaud & Atyeo, 1996; Dabert, 1999).

The genus *Turnixacarus* was described by Gaud and Atyeo in 1996. Currently, there is only one known species assigned to the genus: *T. exutus* Gaud et Atyeo, 1996. This species was collected from *Turnix susinator susinator* (Gmelin) (Gruiformes, Turnicidae) in Indonesia, *T. susinator fasciata* (Temminck) in Philippine Islands and *T. susinator blakistoni* (Swinhoe) in Vietnam (Gaud & Atyeo, 1996). In this paper, a new species is described.

Idiosomal length was measured from the anterior margin of prodorsum to the opisthosomal lobes. Width of idiosomal was measured at the level of setae *c*2. Distances between pairs of setae were taken from the centre of insertion. The measurements in micrometers are given for the holotype male and nine paratype specimens (two males and seven females). The terminology of idiosoma and chaetotaxy follows that of Gaud and Atyeo (1996). Holotype (male) and paratypes are deposited in the Insect Collection, Southwest University, Chongqing, China.

Turnixacarus Gaud et Atyeo, 1996 New record to China

Type species: *Turnixacarus exutus* Gaud and Atyeo, 1996

Gnathosoma quadrate; epimerites I U-shaped; setae *d*1, *e*1, *h*1, and solenidia σ II, σ III absent; cupules, opisthonotal gland openings absent; dorsal

idiosomal shields entire, glabrous, surrounded by wide striae; without scapular shield and humeral shield; setae *c*3 short, piliform; legs I–IV subequal in length; tarsi I, II slightly longer than tibiae I and II; setae *ba* near ω 1 on tarsi I and II; ω 1 on tarsi I minute; ambulacra edentate, with a small notch at the margin midpoint.

Key to Species of *Turnixacarus* Gaud et Atyeo, 1996

1. Epimerites IIIa absent in both sexes; male lobes without postlobar membranes, setae *h*2, *h*3 on hysteronotal shield; female setae *e*2 15–20 μ m in length *T. exutus* Gaud et Atyeo, 1996
- Epimerites IIIa present in both sexes; male lobes with postlobar membranes, setae *h*2, *h*3 on the membranes; female setae *e*2 52–65 μ m in length *T. longisetus* sp. nov.

Turnixacarus longisetus sp. nov. (Figs. 1–6)

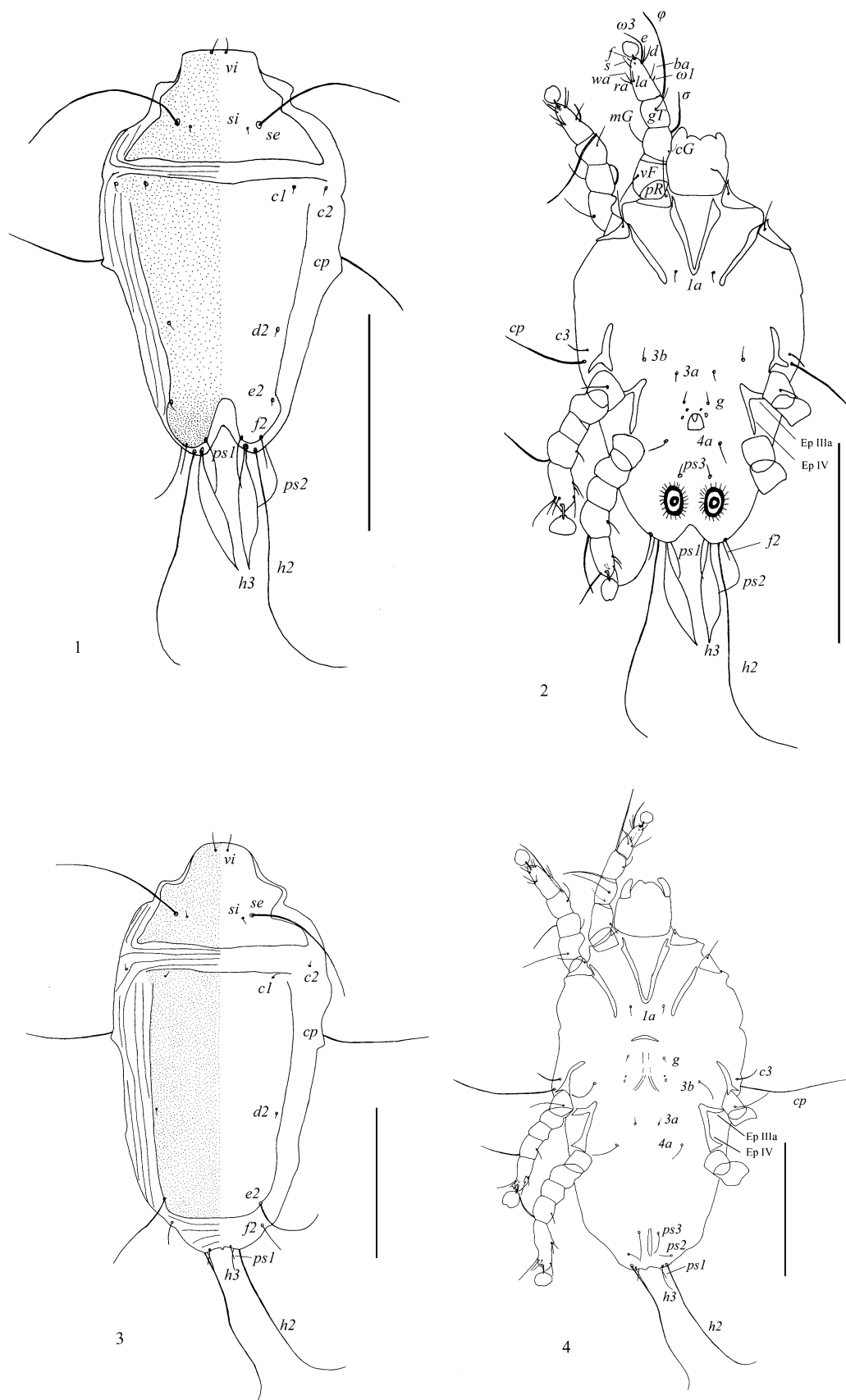
Male. Terminal cleft small; lobes with postlobar membranes; setae *ps*1 piliform; setae *h*3 large, fusiform; genital organ between coxae IV; epimerites IIIa present, jointing with epimerites IV; adanal discs sclerotized, disc membranes with radiating striae; legs III, IV subequal; tarsus IV with subapical claw, setae *d*, *e* not visible. Idiosomal measurements: length 185.1 (181.9, 184.3), width 116.9 (123.5, 126.2). Distance between setae: *se*: *se* 38.4 (39.8, 38.5), \bar{x} : \bar{x} 27.0 (28.4, 27.4), *h*3 length 50.1 (50.0, 50.2). Length of legs, tibiae: I 17.4 (16.3, 16.6), II 17.5 (16.0, 16.3), IV 16.3 (16.1, 16.8); tarsi: I 21.1 (21.0, 22.1), II 21.8 (21.9, 22.3), IV 20.9 (20.9, 21.6).

Female. Proterosoma similar to male; hysteronotal shield including setae *e*2, *e*2 long; setae *h*3 minute; epigynum short; epimerites IIIa present, jointing with epimerites IV. Idiosomal measurements: length 283.1 (282.0–329.7), width 150.4 (156.0–199.7). Distance between setae: *se*: *se* 51.6 (53.6–63.9), \bar{x} : \bar{x} 38.1 (39.4–46.6). Length of legs, tibiae: I 20.3 (19.5–23.5), II 20.3 (19.3–22.1), IV 16.1 (17.8–22.4); tarsi: I 23.7 (28.5–32.1), II 23.8 (28.2–35.4), IV 36.6 (36.3–42.5).

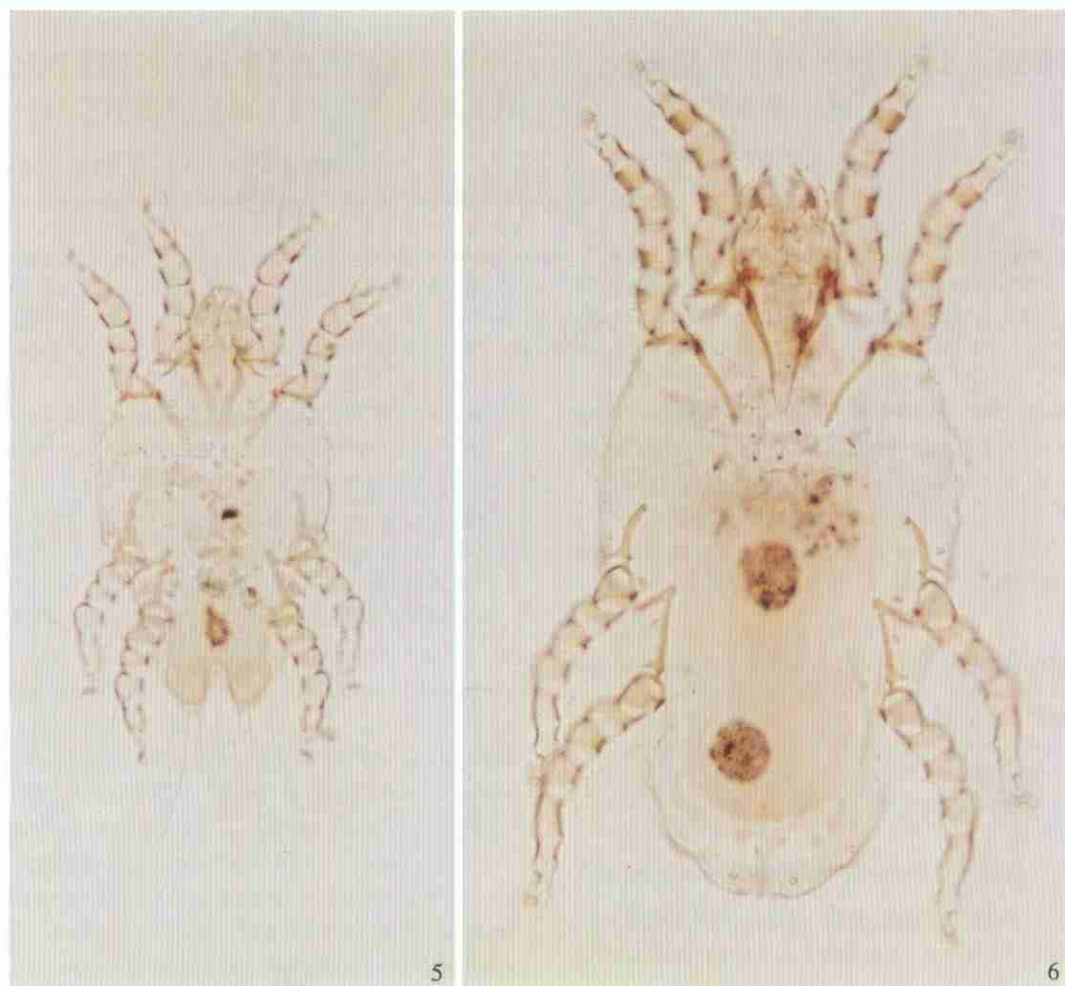
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Figs. 1-4. *Turnixacarus longisetus* sp. nov. 1. Male dorsal view. 2. Male ventral view. 3. Female dorsal view. 4. Female ventral view. Ep. epimerites. Scale bars= 100 μ m



Figs 5-6. *Tumixiaanus longisetus* sp. nov. 5. Male habitus (20 \times). 6. Female habitus (20 \times).

Etymology. The specific name, *longisetus*, is a combination of the words *long* and *seta*, referring to the long setae *e2* in female.

Holotype ♂, paratypes 2 ♂ ♂, 7 ♀ ♀, from *Tumix suscitator blakistoni* (Swinhoe) (Gruiformes, Turnicidae), Libo (25°09'-25°20' N, 107°52'-108°45' E), Guizhou, China; 22 Aug. 2008, collected by WANG ZiYing.

Distribution. China (Guizhou).

Remarks. The new species is distinctly different from *T. exutus* in: 1) epimerites IIIa present in both sexes; 2) body of male small, lobes with posttobar membranes; 3) setae *e2* of female 2-4 times longer than that of *T. exutus*.

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中国羽螨新纪录属一新种记述

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摘 要 简要介绍了羽螨，并记述中国 1 新纪录属 *Turnixacarus* Gaud and Atyeo, 1996 及 1 新种：长毛三趾鹑螨 *T. longisetus* sp. nov.。新种与已知种 *T. exatus* 的区别在于：新种两性都有亚基节内突 IIa, 并与亚基节内突IV连接；雄螨

体长较短，尾叶周边围有狭窄膜片，着生 h_2 , h_3 毛；雌螨 e_2 毛长是 *T. exatus* 的 2~ 4 倍。标本采自贵州荔波棕三趾鹑 *Turnix susiator blakistoni* 羽毛上，保存于西南大学昆虫标本馆。

关键词 羽螨，翅螨科，三趾鹑螨属，新纪录，新种.

中图分类号 Q959. 226

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